

LISTING OF CLAIMS

1. (Currently Amended) A ballistic armor capable of withstanding penetration by a projectile impacting the armor, the ballistic armor comprising:

 ~~at least one a first energy absorbing layer plate, said at least one energy absorbing layer~~ consisting essentially of a metallic material that ~~absorbs energy from the impacting projectile, said metallic material being at least one of a metallic material~~ that undergoes a reversible phase change upon absorbing energy and a metallic material that exhibits an elastic strain deformation of at least 5%;

 and

 ~~at least one second layer~~ a second plate of a metallic material that is contiguous with and metallurgically bonded to the at least one energy absorbing layer, wherein said second plate comprises a material selected from the group consisting of an α titanium alloy that is at least one of grades 1-4 CPTi, an $\alpha\beta$ titanium alloy that is Ti(6-4), and a β titanium alloy that is at least one of Ti(10-2-3) or Ti(15-3-3-3); and the metallic material of said second plate is different from said metallic material of said first energy absorbing plate.
- 2.-3. (Canceled)
4. (Previously Presented) The ballistic armor of claim 1, wherein said metallic material that undergoes a reversible phase change upon absorbing energy undergoes a reversible endothermic phase change when heated to a predetermined temperature.
5. (Previously Presented) The ballistic armor of claim 4, wherein said predetermined temperature is at least -50°C and is no greater than 200°C.
6. (Currently Amended) The ballistic armor of claim 5, wherein said ~~metallic material that absorbs energy from the impacting projectile~~ first energy absorbing plate is selected from the group consisting of nickel-titanium alloys, copper-zinc alloys, and copper-aluminum-nickel-manganese alloys.
7. (Currently Amended) The ballistic armor of claim 6, wherein said first energy absorbing plate ~~metallic material that absorbs energy from the impacting projectile~~ is

an alloy consisting essentially of 45 up to 55 atomic percent nickel, 45 up to 55 atomic percent titanium, and incidental impurities.

8. (Currently Amended) The ballistic armor of claim 7, wherein said first energy absorbing plate~~metallic material that absorbs energy from the impacting projectile~~ is Nitinol.
9. – 15. (Canceled)
16. (Currently Amended) The ballistic armor of claim 10, wherein said second plate is diffusion bonded to said first energy absorbing plate.
17. (Currently Amended) The ballistic armor of claim 10, further comprising a third plate disposed opposite said second plate and comprised of a material that differs from said metallic material of said first energy absorbing plate, said third plate being contiguous with and metallurgically bonded to at least a portion of said first energy absorbing plate.
18. (Previously Presented) The ballistic armor of claim 17, wherein said third plate comprises a material selected from the group consisting of titanium, gamma phase titanium-aluminum, α titanium alloy, β titanium alloy, and $\alpha\beta$ titanium alloy.
19. (Currently Amended) The ballistic armor of claim 1, wherein said ~~at least one first~~ energy absorbing layer plate ~~is a first plate consisting~~ consists essentially of 45 up to 55 atomic percent nickel, 45 up to 55 atomic percent titanium, and incidental impurities, ~~and wherein said at least one second layer is a second plate including a material selected from the group consisting of titanium, gamma phase titanium-aluminum, α titanium alloy, β titanium alloy, and $\alpha\beta$ titanium alloy.~~
20. (Canceled)
21. (Currently Amended) The ballistic armor of claim 19, further comprising a third plate disposed opposite said second plate and comprising a material that differs from said first energy absorbing plate.

22. (Previously Presented) The ballistic armor of claim 21, wherein said third plate comprises a material selected from the group consisting of titanium, gamma phase titanium-aluminum, α titanium alloy, β titanium alloy, and $\alpha\beta$ titanium alloy.
23. (Currently Amended) The ballistic armor of claim 21, wherein said first energy absorbing plate is contiguous with said third plate.
24. – 58. (Canceled)

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